

LUD 5353.5 DIV JEL/NDH (10016355)

Sub H17
Claim 39:

An isolated nucleic acid molecule which encodes a tumor rejection antigen precursor expressed in melanoma cells, wherein the complementary sequence of said isolated nucleic acid molecule hybridizes to the nucleotide sequence set forth in SEQ ID NO: 13, 14 or 15 at 0.1XSSC 0.1%SDS for 30 minutes, at 65°C.

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Sub A27
Claim 40:

An isolated nucleic acid molecule which encodes a tumor rejection antigen expressed in melanoma cells, wherein the complementary sequence of said isolated nucleic acid molecule hybridizes to the nucleotide sequence set forth in SEQ ID NO: 13, 14 or 15 at 0.1XSSC, 0.1%SDS, for 30 minutes, at 65°C.

Claim 41:

An isolated nucleic acid molecule which encodes a tumor rejection antigen precursor expressed in melanoma cells, wherein the complementary sequence of said isolated nucleic acid molecule hybridizes to the nucleotide sequence set forth in SEQ ID NO: 13, 14 or 15 at 0.1XSSC 0.1%SDS, for 30 minutes at 65°C.

Claim 43:

An isolated cDNA molecule which encodes a fragment of a tumor rejection antigen precursor expressed in melanoma cells, wherein said fragment is processed by cell to a tumor rejection antigen, wherein the complementary sequence of said isolated nucleic acid molecule hybridizes to nucleotides 625-1575 of SEQ ID NO: 13, nucleotides 625-1575 of SEQ ID NO: 14, or nucleotides 1-670 of SEQ ID NO: 15 at 0.1XSSC, 0.1%SDS for 30 minutes at 65°C.

F2
Claim 44:

An isolated cDNA molecule which encodes a fragment of a tumor antigen expressed by melanoma cells, said tumor rejection antigen consisting of an amino acid sequence that is part of a tumor rejection antigen precursor, wherein said tumor rejection antigen precursor is encoded by a nucleic acid molecule the complementary sequence of which hybridizes to nucleotides 625-1575 of SEQ ID NO: 13, nucleotides 625-1575 of SEQ ID NO: 14, or nucleotides 1-670 of SEQ ID NO: 15 at 0.1XSSC, 0.1%SDS for 30 minutes at 65°C.

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Claim 58: An isolated nucleic acid molecule which encodes a tumor rejection antigen precursor expressed by melanoma cells encoded by nucleotides 625-1575 of SEQ ID NO: 13, nucleotides 625-1575 of SEQ ID NO: 14, or nucleotides 1-670 of SEQ ID NO: 15.

Claim 59: An isolated nucleic acid molecule which encodes a tumor rejection antigen precursor expressed by melanoma cells that is encoded by nucleotides 625-1575 of SEQ ID NO: 13, nucleotides 625-1575 of SEQ ID NO: 14, or nucleotides 1-670 of SEQ ID NO: 15.

F3 Claim 60: An isolated nucleic acid molecule which encodes a tumor rejection antigen expressed by melanoma cells, the amino acid sequence of which consists of amino acid sequence that is a part of the amino acid sequence encoded by nucleotides 625-1575 of SEQ ID NO: 13, nucleotides 625-1575 of SEQ ID NO: 14, or nucleotides 1-670 of SEQ ID NO: 15.

Claim 61: An isolated genomic DNA molecule which encodes a MAGE4 or MAGE-41 tumor rejection antigen precursor expressed by melanoma cells comprising one of:

(i) nucleotides 625-1575 of SEQ ID NO: 13;

(ii) nucleotides 625-1575 of SEQ ID NO: 14; or

(iii) nucleotides 1-670 of SEQ ID NO: 15.

part of 1 exon or spliced out

Claim 66: An isolated genomic DNA molecule consisting of:

(i) nucleotides 625-1575 of SEQ ID NO: 13; (ii)

(ii) nucleotides 625-1575 of SEQ ID NO: 14; or

(iii) nucleotides 1-670 of SEQ ID NO: 15.

how can cDNA be genomic

REMARKS

The amendments to claims 38, 39, 40, 41, 43 and 44 are in response to suggestions made by Dr. Caputa. It should be pointed out that by defining the tumor rejection antigen precursor as one expressed by melanoma cells, this should not be taken as meaning that all melanoma cells express the molecule, or that expression is exclusive to melanoma. Other cancer cells can, and do, express the molecule.

Additional changes were made in claim 58, 59, 60, 64 and 66. Specifically, the open reading frame for SEQ ID NO: 13 was added to the claim. Also, the open reading frame was